

**WHAT IS CLAIMED:**

1. An apparatus for preparing a conduit for grafting, comprising:
  - a first element for inserting liquid into a conduit, the first element including an inelastic housing enclosing an inner volume;
  - a second element for regulating pressure within the first and second elements, the second element including an inelastic housing enclosing an inner volume, the second element being coupled to the first element such that the inner volume of the second element is continuous with the inner volume of the first element; and
  - a pressure operated valve coupled to the second element for providing access to the inner volume of the second element, when pressure in the second element is above a threshold, whereby the valve releases pressure from the inner volumes of the first and second elements.
2. The apparatus of claim 1, wherein the first element comprises:
  - a syringe including:
    - a cylindrical inelastic housing enclosing the inner volume, the housing having a first end and a second end;
    - an aperture in the first end of the housing; and
    - a plunger disposed within the inner volume of the housing, the plunger for pushing fluid within the inner volume of the housing through the aperture.
3. The apparatus of claim 1, wherein the second element comprises:
  - a cylindrical inelastic housing enclosing the inner volume, the housing having a first end and a second end;
  - an aperture in the first end of the housing, wherein the aperture is communicated with the first element such that the inner volume of the second element is continuous with the inner volume of the first element.

4. The apparatus of claim 3, wherein the pressure controlled valve comprises:  
an opening in the second element;  
a plunger slidably disposed within the inner volume of the second element; and  
a spring disposed within the inner volume of the second element, wherein the spring is positioned between the second end of the housing and the plunger, wherein the plunger in a rest position is between the opening and the aperture, and wherein as fluid is inserted into the inner volume of the housing via the aperture, an increased pressure within the inner volume of the housing moves the plunger toward the opening.
5. The apparatus of claim 4, wherein the opening is positioned in a side of the housing of the second element providing access to the inner volume of the second element, wherein at normal pressure the opening is closer to the second end than the plunger and wherein as pressure within the inner volume of the housing increases so as to move the plunger past the opening, the pressure within the inner housing is released through the aperture.
6. The apparatus of claim 1, further comprising:  
a third element for coupling the first element with the second element, the third element including an inelastic housing enclosing an inner volume and a first and second end, wherein the first end of the third element is coupled with the first element and the second end of the third element is coupled with the second element such that the inner volumes of the first, second and third elements are continuous.
7. The apparatus of claim 1, wherein the pressure-operated valve is adapted to allow selection of the threshold.
8. The apparatus of claim 7, wherein a plurality of openings are positioned along the second element, and further comprising a selector member movably mounted relative to the plurality of openings and positionable so as to selectively open one and block others of the plurality of openings.

9. A method for preparing a conduit for grafting, comprising:  
extracting a portion of a conduit;  
connecting a first end of the conduit that was extracted to a coupling, wherein a seal is created between the coupling and the conduit and wherein the coupling provides access to an inner volume of the conduit;  
occluding the second end of the conduit; and  
inserting a fluid into the conduit via the coupling using an apparatus comprising:  
a first element for inserting fluid into a conduit, the first element including an inelastic housing enclosing an inner volume;  
a second element for regulating pressure within the first and second elements, the second element including an inelastic housing enclosing an inner volume, the second element being coupled to the first element such that the inner volume of the second element is continuous with the inner volume of the first element; and  
a pressure operated valve coupled to the second element for providing access to the inner volume of the second element, when pressure in the second element is above a threshold, whereby the valve releases pressure from the inner volumes of the first and second elements.
10. The method of claim 9, further comprising:  
determining whether the fluid is leaking from a side branch of the conduit that was extracted;  
and  
if leaking is detected, surgically occluding the conduit so as to stop leaking.
11. The method of claim 9, wherein the pressure-operated valve is adapted to allow selection of the threshold.
12. The method of claim 11, wherein a plurality of openings are positioned along the second element, and further comprising a selector member movably mounted relative to the plurality of openings and positionable so as to selectively open one and block others of the plurality of openings.

13. An apparatus for regulating pressure applied during a medical procedure, comprising:  
an inelastic housing enclosing an inner volume, the housing having a first and second end;  
an aperture in the housing, the aperture for coupling to an element for applying a pressure during a medical procedure, the element having an inner volume communicated with the inner volume of the housing; and  
a pressure-operated valve coupled to the housing for providing access to the inner volume of the housing when pressure in the housing is above a threshold, whereby the valve releases pressure from within the inner volume of the housing.
14. The apparatus of claim 13, wherein the housing is a cylindrical inelastic housing enclosing the inner volume.
15. The apparatus of claim 14, wherein the pressure-operated valve comprises:  
an opening in the housing;  
a plunger disposed within the inner volume of the housing;  
a spring disposed within the inner volume of the housing, wherein the spring is positioned between the second end of the housing and the plunger, wherein the plunger in a rest position is between the opening and the aperture, and wherein as fluid is inserted into the inner volume of the housing via the aperture, increased pressure within the inner volume of the housing moves, the plunger moves toward the opening.
16. The apparatus of claim 15, wherein the opening is positioned in a side of the housing providing access to the inner volume of the housing, wherein at normal pressure the opening is closer to the second end than the plunger and wherein as pressure within the inner volume of the housing increases so as to move the plunger past the opening, the pressure within the inner housing is released through the opening.

17. The apparatus of claim 13, wherein the pressure-operated valve is adapted to allow selection of the threshold.
18. The apparatus of claim 17, wherein a plurality of openings are positioned along the second element, and further comprising a selector member movably mounted relative to the plurality of openings and positionable so as to selectively open one and block others of the plurality of openings.
19. The apparatus of claim 13, wherein the pressure-operated valve is adapted to release negative pressure from the housing when the negative pressure exceeds the threshold, and wherein the threshold is a maximum negative pressure.
20. The apparatus of claim 19, wherein the pressure operated valve comprises a housing having an aperture communicated with the element, a plunger disposed in the housing and having an opening passing therethrough, and a release-plunger positioned in the opening, the release plunger being adapted to be pushed away from the plunger upon movement of the plunger toward the aperture beyond a threshold position whereby negative pressure is released wherein the plunger reduces the threshold position.